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<https://reachmd.com/programs/cme/practical-approaches-to-addressing-vaccine-hesitancy/15409/>

Time needed to complete: 53m

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Practical Approaches to Addressing Vaccine Hesitancy

Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCME curriculum.

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Dr. Anand:

Hi, my name is Vik Anand. I'm a Pediatric Infectious Diseases Specialist at Cedars Sinai Medical Center. I'm here with my colleague, Dr. Priya Soni.

Dr. Soni:

Hi, Vik, thank you so much for the introduction. I'm also a Pediatric Infectious Disease Specialist at Cedars Sinai.

Dr. Anand:

So we've been talking a lot about RSV, especially given all the disease that's been causing recently. I was wondering what kind of treatments do we have to offer parents at the moment with a child who's infected with RSV?

Dr. Soni:

Yeah, so at the moment, our options are quite limited to supportive care. We know that RSV in young infants is a big deal and it leads to many hospitalizations and a significant amount of death. But our options for treatment are limited to supportive measures only, including I.V. fluids, we're also able to provide oxygen support and manual nasal suctioning for the small infants. But that's pretty much it.

Alright. So, Vik, why don't you tell us a little bit more about the history of attenuated vaccines. And, you know, I know that is opening a big can of worms, but if you can kind of take us through the history of RSV vaccines.

Dr. Anand:

Yeah, so there's been a lot of trials in terms of RSV, preventing RSV disease in terms of what can we do to stop it rather than, you know, just sort of giving them monoclonal is and hoping for the best once they're already infected. The question is, can we just prevent disease in general?

There have been a lot of trials over the years trying to get something to protect - a vaccine to protect babies and children from RSV disease, and even adults who have a lot of struggles with RSV as well. In fact, sometimes even worse disease than children.

And most of those vaccine efforts in the past have not been very fruitful. And one of the most exciting things on the horizon is that, by doing a lot of research, investigators were able to find a form of the RSV where it's actually fusing to the membrane. And because it sort of protects itself from that aspect, it was really hard to stop it. But by engineering and studying the virus, they were able to identify a fusion complex with a membrane that now gives really exciting opportunity to stop RSV from even entering cells and causing disease. And so, I think that's where most of these new vaccine trials seem to be on the horizon.

Dr. Soni:

So this is really exciting over the last 30 years to see this kind of come about at this point.

Dr. Anand:

Yeah. Is there any way of preventing RSV disease at the moment? And what are those options?

Dr. Soni:

Yeah, currently for high-risk infants, those including premature infants that meet certain criteria, those with chronic lung disease or other cardiac conditions, as well as a long list of other conditions, these infants can be qualified for a once-monthly monoclonal antibody against RSV called palivizumab. And we're able to provide that in that seasonality of RSV, once a month, usually around 5 months a season lasts.

Dr. Anand:

But it requires them to keep going back over and over to the clinic. Is that correct?

Dr. Soni:

Correct. Yeah, there's a lot of, you know, downsides and hindrances to these kids coming back once monthly and getting that protection they need in that critical period. And so that's a big challenge in ways that we can kind of prevent this terrible infection from impacting them.

Dr. Anand:

Yeah. I imagine that's a big burden on both the families in the healthcare system. Is there anything on the horizon that, you know, we can look forward to preventing it?

Dr. Soni:

Yeah, there is one exciting new monoclonal that is currently being accepted for review by the FDA. It is called nirsevimab. And this is a really exciting new option that we're hopefully going to have available. It's a single dose, long-acting antibody that you can give sort of at the start of the season. And it's been developed to prevent infection in these newborns, specifically causing lower respiratory tract infections. And so, we're hoping to hear more about nirsevimab in the future.

And Vik, I guess I'll turn it over to you.

Dr. Anand:

Yeah, of course.

Dr. Soni:

Why don't you tell us about the sort of history of RSV vaccines and where we've been and what can we look forward to on the horizon?

Dr. Anand:

Yeah, I mean, the hope has always been to prevent RSV from even happening, not having to give monoclonals and passive immunity, but actually have an active immune response. Unfortunately, in the past, RSV vaccines have not been very successful in terms of preventing disease. Trials using older proteins and that kind of thing just didn't seem to work at preventing it.

What's really exciting is through a lot of research and hard work, people have identified a fusion protein that will prevent RSV from even entering the cell in the first place. And right now, there's at least three different trials of new vaccines looking to prevent it that are already in clinical trials and hopefully fast track. There's early data suggesting excellent protection against RSV virus, and they do it by giving the vaccine to pregnant women and the pregnant women will actually transfer that immunity to the newborn baby. And so far, at least in babies from 0 to 90 days, it's really cut down the risk of developing RSV in the first place. And even excitingly, seems to have an effect going beyond that.

So really a lot of exciting things on the horizon in terms of preventing RSV disease.

Dr. Soni:

Excellent. That's something to really look forward to. Thank you.

Dr. Anand:

Yeah, of course. And of course, you know, with so much RSV disease in adults as well, the hope is if we really show good protection, that really we can prevent RSV disease in not only high-risk people, but also in adults and children in general, since most of the disease burden, even though we have high-risk population, is still in the average child, and offering an ability to protect them would be really phenomenal.

Dr. Soni:

Well, that was really interesting. I hope everyone learned something. I know I did. And thank you all for your attention and time.

Dr. Anand:

Thank you so much for having me as well.

Announcer:

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